**The OC 200
by KBA-Metronic AG**

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# OC 200

**Cutting-edge, modular offset printing technology
for printing single cards and very small formats
on a variety of materials and thicknesses.**

KBA-Metronic
Aktiengesellschaft

The OC 200 can handle all punched or molded plastics which conform to the ISO standard format (85.5 x 54 mm), including cards with chip cavity. The system will accept cards with a thickness between 0.5 (0.35 mm for the thin card version) and 1.2 millimeters.



The KBA-Metronic OC 200: waterless offset printing and UV technology. Flexible technology which can be adapted to the customer's requirements and order profile. Quality and cost effectiveness: the secret to printing very small formats.

The KBA-Metronic OC 200 offers cutting edge technology. It is a pioneering engineering achievement and is suitable for printing on very small formats and single cards. Demand for phone cards, loyalty cards, access cards and advertising cards from telecommunications service providers, department stores and a wide range of other institutions continues to increase. The quality of the cards must be excellent, but the costs must remain low.

The KBA-Metronic AG OC 200 can easily handle all standard plastics (ABS, PVC, PET, PS, etc.) and cards with chip cavity up to a thickness of 1.2 mm. This economic, flexible system with four print units is the ideal, user-friendly solution for CMYK print runs.

There is a low-cost version of the OC 200 with only two print units, which can be used for two-pass, four-color printing on one side to produce brilliant, photorealistic quality.

The unique printing system developed by KBA-Metronic produces high-precision results in rich colors throughout the entire print run with low startup waste. The system features waterless offset printing, a "zoneless" short inking unit and UV-hardening ink. Even printers who do not have special qualifications can quickly learn how to use this system. In contrast to conventional offset printing, there is no need to adjust ink zones, dampening units and inking rollers or regulate the ink-water balance, etc. Printing quality remains constant even when different operators take over at the start of a new shift.

The modular OC 200 makes optimal use of space. If required, the system can be modified to meet the order profile. It can then be upgraded at minimal cost

# OC 200 –
# Modular design:

## printing on single cards and very small formats in small to medium print runs

at a later time, for example by adding a 5th or 6th print unit for special colors or a rotation unit for two-sided printing (optional).

**Outstanding advantages of the OC 200**
- fast, simple print plate replacement / changeover on all units for a new job takes no more than 20 minutes
- ergonomic print unit design for one-person operation, even if "unquali-fied" printers are operating the system
- absolutely brilliant results using FM screening or resolutions up to 120 dots/cm (300 lines/inch) for photo-realistic images
- the "zoneless" anilox short inking unit produces consistently high quality printing from the first card to the last
- the use of UV-hardening ink and varnish makes it possible to feed the cards to downstream processing immediately after printing
- brilliant, abrasion-resistant, scratch-resistant finish on the cards
- synchronized drive ensures excellent registration accuracy
- low wastage rate (only a few units)
- flexibility to handle very small formats
- one or two track card production of ISO format cards increases the utili-zation rate (can print on two sides)
- "fast track" print jobs can be completed at short notice
- ideal for small to medium print runs
- can be fitted with up to six print modules, primer unit, varnish module, paternoster vertical conveyor
- the modular KBA-Metronic design makes it easy to modify the OC 200 on site to meet customer and job specific requirements (can also be done as a retrofit)
- low investment costs

A separate paternoster vertical conveyor guarantees excellent high-gloss results.

The automatic OC 200 cleaning system ensures that the surfaces of the cards are absolutely clean for the high quality printing process.

The OC 200 is designed for maximum ease of use. The printing plates for all colors can be changed in only 20 minutes maximum, making the OC 200 a very efficient and economical solution for small print runs of less than 1,000 pieces. Rapid print plate change between jobs increases the OC 200 utilization ratio in one and two track operation. Maximum capacity is up to 15,000 cards per hour.

A low wastage rate for proofs and elimination of ink adjustment during production save time and money. Multi-color printing (CMYK plus special colors) and varnishing can be performed in a single pass.
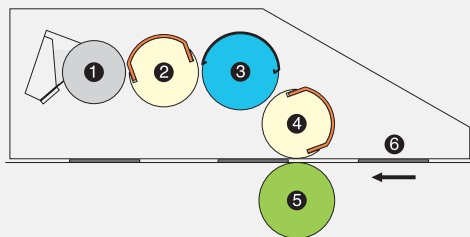
The unique short inking unit for water-less offset printing using "zoneless" anilox ink transfer ensures uniform color to give you excellent print quality. You can use special colors (5th and 6th printing units) and partial varnishing in combination with UV-hardening ink and varnish to achieve special visual effects. The dosing cylinder is kept at a constant temperature during varnishing on a large surface to ensure that a flawless coating is applied. The varnish coating is distributed evenly in the paternoster vertical conveyor, creating an attractive gloss effect and providing good abrasion resistance.

**Large print runs in non-stop operation**

The standard loading magazine module and the unloading module can store up to 500 cards per track (depending on card thickness). Additional loading and unloading modules can be added to run the OC 200 in nearly non-stop mode. The modular design of the OC 200 offers first time users who choose the basic version with two printing units the unparalleled flexibility to add other features to the system at a later time: primer and varnishing unit, additional printing modules, rotation unit, paternoster conveyor, monitoring conveyor, transport conveyor for L and U configurations, removable magazine in the feed unit and automatic stacking in the delivery magazine. This wide range of options should be enough to satisfy nearly any customer requirements.
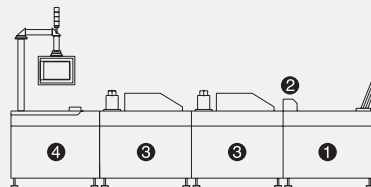
# There is still room for growth:

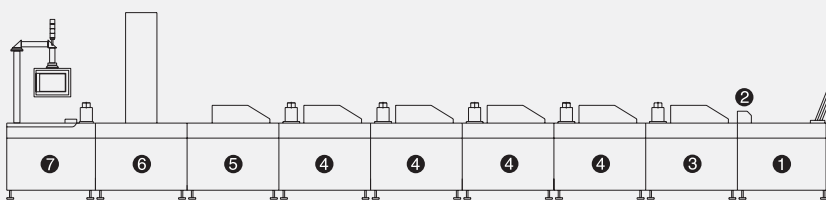## perfect technology for brilliant printing and an expanded order profile

Schematic view of the compact
offset print module:

1  anilox roller with collecting blade
2  plate inker
3  plate cylinder
4  blanket cylinder
5  counter pressure cylinder
6  single card transport level

OC 200 entry-level configuration
with two print modules:

1  infeed module with magazine
2  cleaning station with anti-static device
3  two print modules with UV drier
4  outfeed module with operator display

OC 200 enhanced version with four print modules:

1  infeed module with magazine
2  cleaning station with anti-static device
3  primer module with UV drier
4  four print modules with UV drier
5  varnishing module
6  paternoster vertical conveyor module
7  outfeed module with operator display

The modular design of the OC 200 offers significant flexibility, and it provides a very efficient and economical solution for very small print runs.

The printing plates are easy to swap, and this is one of the features that make the OC 200 so flexible and easy to use. The plates are punched and edged in a punch which was developed by
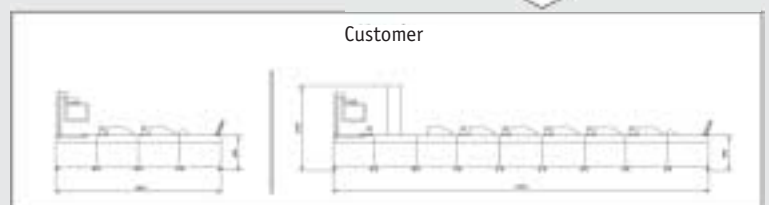


Loading magazine module (right) and four additional card holds for large print runs significantly reduce the need for reloading.

KBA-Metronic AG to ensure exact registration. The plates are easy to mount, and they can be reused for repeat orders at a later time. KBA-Metronic AG offers analogue and digital prepress equipment to produce the plates.

A touchscreen monitor provides a user-friendly way of controlling the full set of OC 200 functions. Integrated sensors, which detect and prevent double feeding and check cavity positioning, enhance production reliability. Automatic fine adjustment in front of each print unit to ensure exact registration accuracy is an unparalleled feature in

this market segment. A modem can be used to link the OC 200 to the service center at KBA-Metronic AG, which can run system checks and remote diagnostics. A hotline is available to provide direct support if a fault should occur.

# Easy to operate:
## compact safety
## and performance

**Technical data for a standard configuration OC 200 with four print units (items which will vary for the version with 2 print units are indicated by ••)**

**Print process**

| | |
|---|---|
| Print system: | waterless offset printing |
| Printing units: | 4 (••2) offset printing units |
| | 1 primer offset printing unit (option) |
| | 1 varnish offset printing unit (option) |
| Ink / varnish: | UV-hardening special ink |
| | varnish or decorative ink (option) |
| Capacity: | max. 15,000 cards/hr |
| | with thin card feature: |
| | speed depends on material and thickness |
| Magazine: | holds approx. 500 cards (thickness 0.8 mm) |

**Printing materials/ formats**

| | |
|---|---|
| Printing material: | conventional plastic cards |
| | with or without chip cavity |
| Material: | ABS, PVC, PET, PS, etc. |
| | other materials on request |
| Card formats: | "dual track": |
| | ISO standard size 85.5 x 54 mm (3.4 x 2.1"), |
| | max. 100 x 60 mm (3.9 x 2.4"). |
| | "single track": max. 140 x 100 mm (5.5 x 3.9") |
| Card thickness: | 0.5 mm - 1.2 mm (0.02 - 0.047") |
| | with thin card feature: |
| | down to 0.35 mm (0.014") |

**Printing plates:**  (waterless, analogue or digital)
Format / thickness:  150 x 150 x 0.15 mm (5.9 x 5.9 x 0.006")

**Length x width x height**  10,540 x 755 x 2,400 mm
(••4,640 x 755 x 2,310 mm)
415.0 x 29.7 x 94.5" (••182.7 x 29.7 x 91.0")
Total weight:  approx. 3.7 tons (8.160 lbs) (••1.6 tons)

**Electrical supply**

| | |
|---|---|
| Supply voltage: | 400 V |
| Network structure: | TN-S, 3L, N, PE |
| Frequency: | 50 Hz |
| Current strength: | 70 A/phase (••35 A) |
| Connected performance: | 45,000 VA (••25.000 VA) |
| Fusing: | 100 A |

**UV drier**

| | |
|---|---|
| Light arc length: | 150 mm (5.9") |
| Power consumption: | 2,250 Watt |
| Lamp current: | approx. 16 A (100 % output) |
| Lamp voltage: | approx. 150 V (100 % output) |

**Pneumatic supply**

| | |
|---|---|
| Air connection: | 6 bar (87.0 psi), 1/4" |
| Air consumption: | max. 280 l/min |

**Emissions**
Noise:  max. 73 db(A)

Technical alterations reserved